

RETAINING DEVICE FOR A DRUM

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a retaining device, and more particularly to a retaining device for drums of different dimensions. With the retaining device, drums of varied sizes are able to be retained.

2. Description of Related Art

With reference to Fig. 7, a conventional retaining device (51) to secure a drum (in phantom line) is mounted on a drum stand (50) and has a top clamping seat (510) securely mounted on a distal end of the drum stand (50) and a bottom seat (511) slidably mounted on the drum stand (50). The top clamping seat (510) has claws (512) divergently extending out of the top clamping seat (510) and each claw (512) having a bent (not numbered) formed a distal end of a corresponding one of the claws (512). The bottom seat (511) has ribs (513) pivotally extending out to engage with a mediate portion of a corresponding one of the claws (512). An adjusting ring (52) is threadingly movable relative to the drum stand (50).

When the retaining device (51) on the drum stand (50) is about to be used to clamp a drum, the operator is able to rotate the adjusting ring (52) upward relative to the drum stand (50) such that the claws (512) are gradually leaned toward the drum seated on the retaining device (51). Consequently, the drum is secured on top of the drum stand (50). However, the retaining device can only retain a drum of a certain dimension. For drums having dimensions greater or smaller than the range of the claws (512), the retaining device will be too

1 small to retain the drums.

2 To overcome the shortcomings, the present invention tends to provide an
3 improved retaining device to mitigate the aforementioned problems.

4 SUMMARY OF THE INVENTION

5 The primary objective of the present invention is to provide an improved
6 retaining device having claws adjustably connected to the arms of the retaining
7 device such that the retaining device is able to cope with drums of different
8 dimensions.

9 To accomplish the foregoing objective, the retaining device of the
10 present invention has arms extending out from a top clamping seat and claws
11 each adjustably connected to a corresponding one of the arms so that when
12 dimension adjustment is required, the operator is able to relocate the claws to
13 deal with drums of different dimensions.

14 Other objects, advantages and novel features of the invention will
15 become more apparent from the following detailed description when taken in
16 conjunction with the accompanying drawings.

17 BRIEF DESCRIPTION OF THE DRAWINGS

18 Fig. 1 is an exploded perspective view of the present invention;

19 Fig. 2 is a schematic side plan view with partial in section, wherein each
20 arm is shown to have cutouts oppositely defined in the arms;

21 Fig. 3 is a schematic plan view showing mutual relationship between the
22 cutout and the pin;

23 Figs. 4 and 5 are schematic side plan views showing the adjustment of
24 the claw relative to the arm;

1 Fig. 6 is a perspective view showing the application of the retaining
2 device of the present invention; and

3 Fig. 7 is a perspective view of a conventional retaining device applied to
4 the drum.

5 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

6 With reference to Fig. 1, the retaining device in accordance with the
7 present invention is adapted to combine with a drum stand (10) and has a top
8 clamping seat (20) securely mounted on a distal end of the drum stand (10) and
9 having arms (22) divergently extending out of the clamping seat (20) and each
10 arm (22) provided with a claw (24), a bottom seat (21) slidably mounted on the
11 drum stand (10) and having linkages (23) pivotally extending upward to
12 pivotally connect to mediate portions of the arms (22). An adjusting ring (30) is
13 threadingly connected to the drum stand (10) to abut a side face of the bottom
14 seat (21). Therefore, when the adjusting ring (30) is rotated to push the bottom
15 seat (21) upward (or downward) relative to the drum stand (10), the upward
16 (downward) movement of the bottom seat (21) forces the claws (24) to clamp
17 (release) a drum (not shown) seated on top of the retaining device of the present
18 invention. However, because the clamping operation of the claws (24) to the
19 drum is the same as that disclosed in the background, detailed description thereof
20 is omitted.

21 With reference to Fig. 2, it is noted that each arm (22) has cutouts (221)
22 defined in a top side and a mediate portion of the arm (22) and each of the claws
23 (24) is formed to be a hollow casing to encase a corresponding one of the arms
24 (22). The claw (24) has two pins (25) respectively extending through a top and a

1 bottom of the claw (24) to correspond to the cutouts (221) formed on the arm (22)
2 and a bend (241) securely formed on a free end of the claw (24).

3 It is noted from Fig. 3 that after the arms (22) are encased by the claws
4 (24), the two pins (25) of each claw (24) are respectively received in the
5 corresponding cutouts (221).

6 Referring to Fig. 2, after the two pins (25) are received in the cutouts
7 (221), a passage (222) is still left above the cutouts (221) to allow the two pins
8 (25) to move out of the cutouts (221). Then, the operator is able to rotate the
9 adjusting ring (30) to clamp the drum on top of the drum stand (10).

10 With reference to Figs. 4 and 5, when the drum size is changed, the
11 operator is able to lift the claw (24) to release the pins (25) from the restriction of
12 the cutouts (221). Thus the two pins (25) are within the passages (222). At this
13 moment, the operator is able to move the claws (24) to new locations to allow the
14 pins (25) to be seated in the new cutouts (221) to fit the drum size.

15 With reference to Fig. 6, after the adjustment of the claws (24), the
16 retaining device (20) of the present invention is able to fit drums of different
17 dimensions without the need of a further retaining device.

18 It is to be understood, however, that even though numerous
19 characteristics and advantages of the present invention have been set forth in the
20 foregoing description, together with details of the structure and function of the
21 invention, the disclosure is illustrative only, and changes may be made in detail,
22 especially in matters of shape, size, and arrangement of parts within the
23 principles of the invention to the full extent indicated by the broad general
24 meaning of the terms in which the appended claims are expressed.